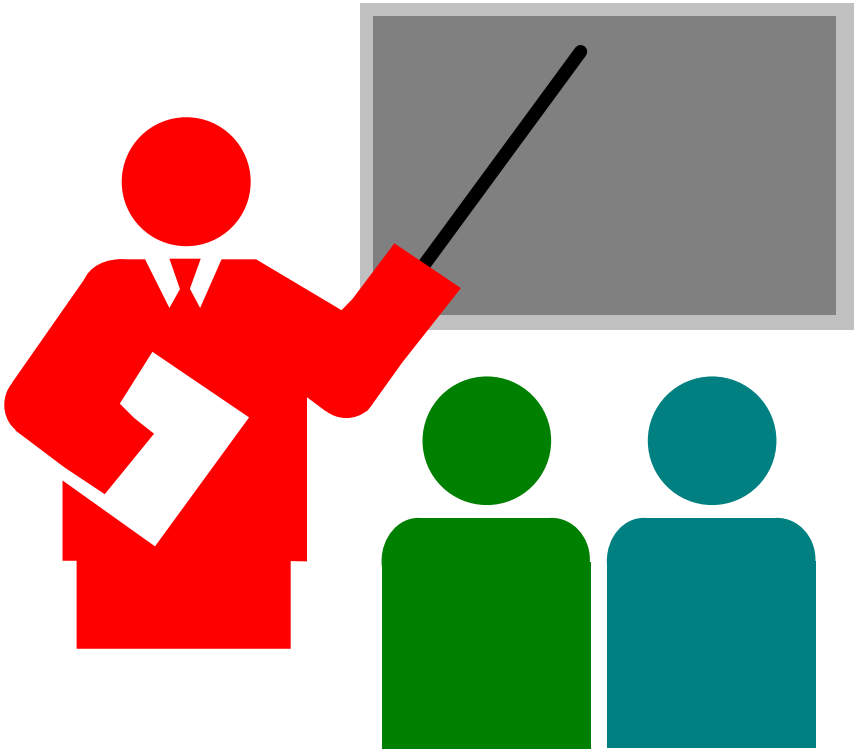
JOINT TECHNICAL ARCHITECTURE

Version 3.1

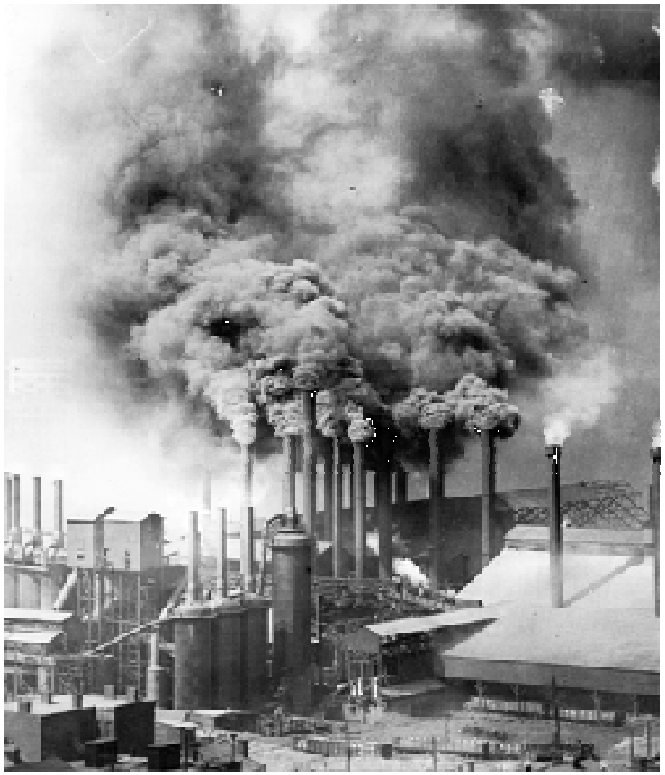
(JTA Version 3 with Substantive Change 1)

Briefing Outline

- **Background**
- **Overview**



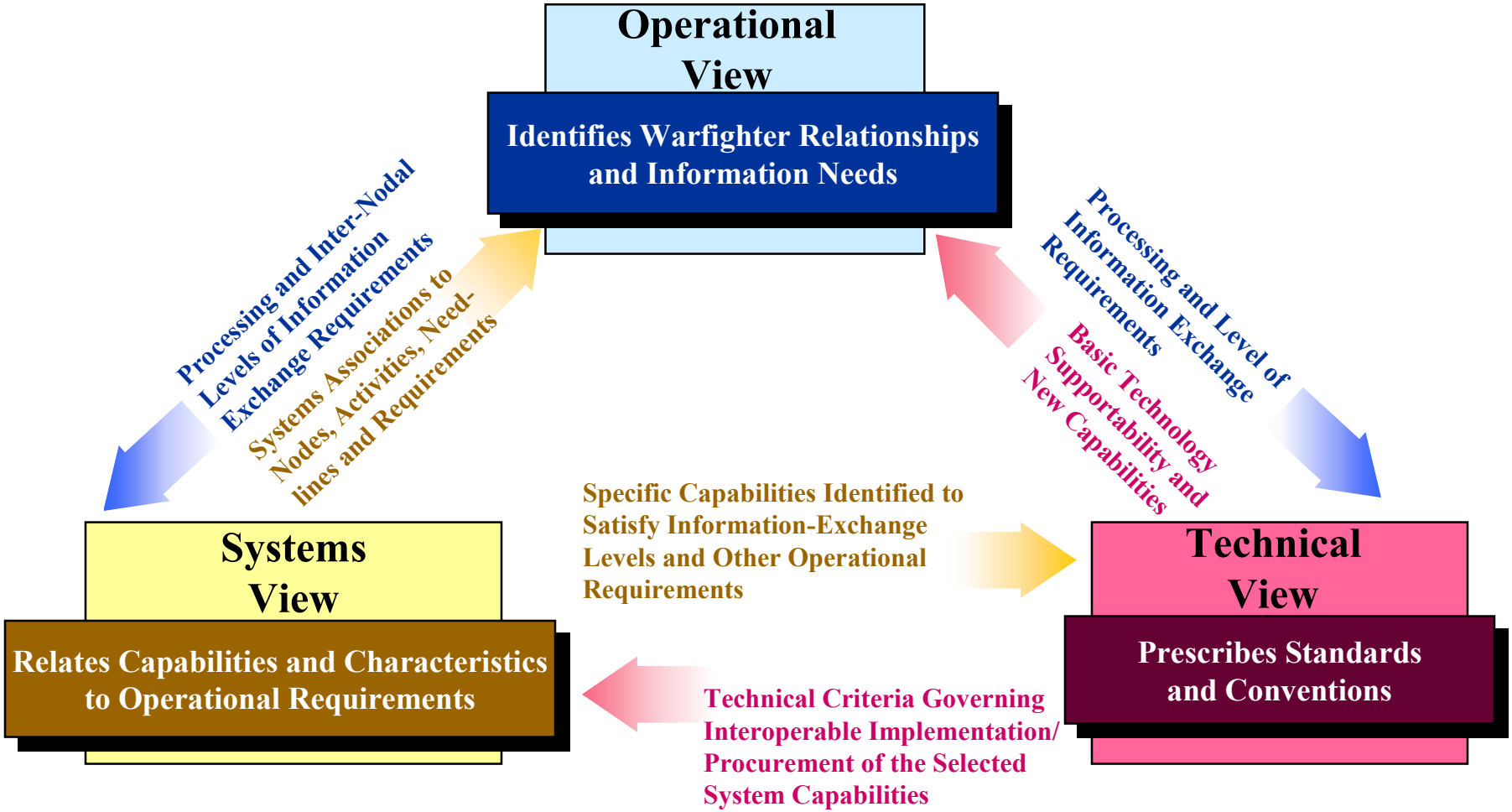
The Need



C2, Weapon Systems, Health Services, Acquisition, Logistics, Finance

- Future operations will increasingly be Joint
- Lack of interoperability within and across Services
- Lack of common technical guidance
- 14 Nov 1995 ASD(C3I) memo directed the development of a single technical architecture, so that systems can be born Joint and interoperable
- 1996 USD(AT&L) and JCS/J6 joined with ASD(C3I) to form
  - Technical Architecture Steering Group
  - Architecture Coordination Council

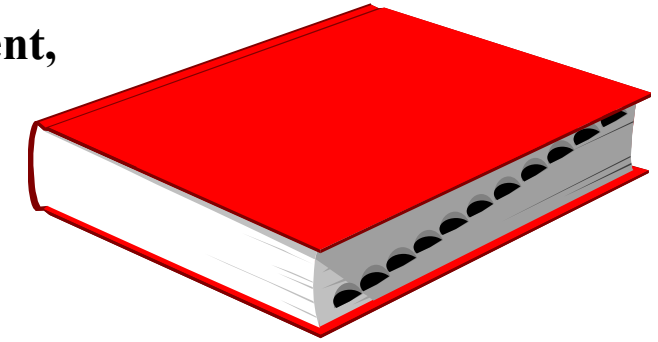
C4ISR Architecture Framework



Source: " C4ISR Architectural Framework," Version 2.0, 18 Dec 1997

Definition of Technical Architecture

"A minimal set of rules governing the arrangement, interaction, and interdependence of the parts or elements of a system whose purpose is to ensure that a conformant system satisfies a specified set of requirements."



- **Identifies the services, interfaces, standards, and their relationships.**
- **Provides the technical guidelines for implementation of systems upon which:**
  - **Engineering specifications are based**
  - **Common building blocks are built**
  - **Product lines are developed**

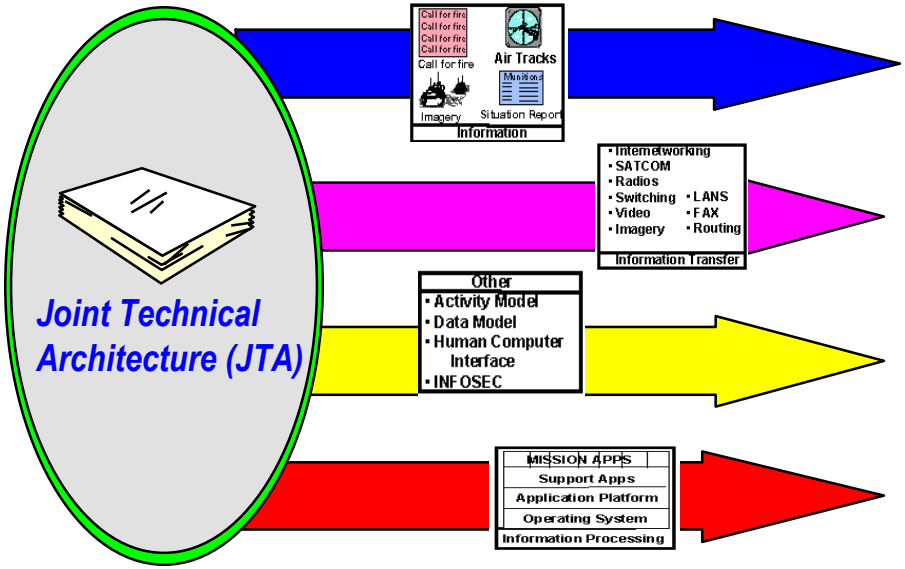
Source: C4ISR Architecture Framework, Version 2.0, 18 Dec 1997

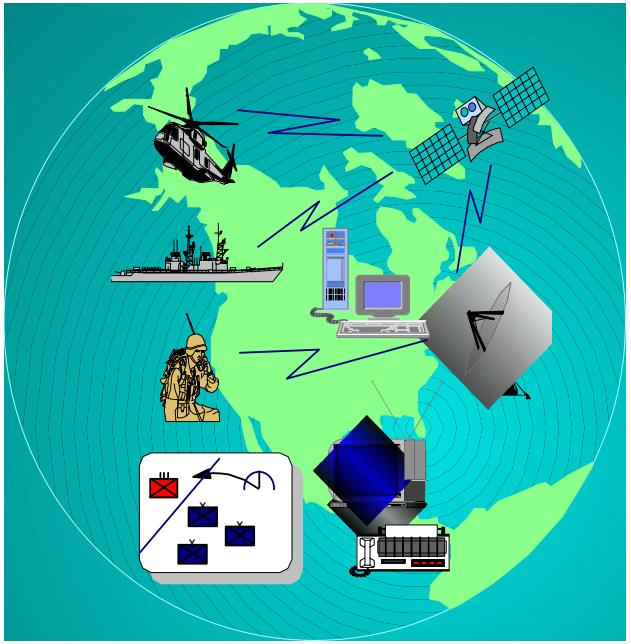
Community Participation in JTA

- **Uniformed Services**
  - Army, Navy, Marine Corps, Air Force, Coast Guard
- **Intelligence Community**
  - NRO, NSA, NIMA, DIA/DoDIIS
- **Defense Agencies**
  - DISA, DLA, DFAS
- **Joint Staff and Combatant Commands**
  - JS/J6, USSOCOM, USTRANSCOM
- **Principal Staff Assistants**
  - OASD(C3I), OUSD(AT&L)/OSJTF, OASD(HA)
- **Others**
  - BMDO, DARPA, DMSO, Weapons Systems Community

Joint Technical Architecture Scope

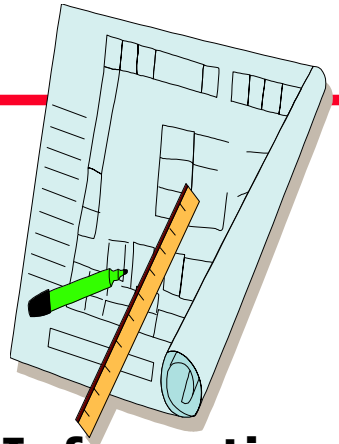
"Defines DOD's minimum set of rules governing the arrangement, interaction, and interdependence of the parts or elements, whose purpose is to ensure that systems conform with a specific set of requirements. It identifies system services, interfaces, standards, and their relationships."





Consists primarily of interface standards/protocols for information transport, content and format, and information processing

Organization of the JTA Version 3.1

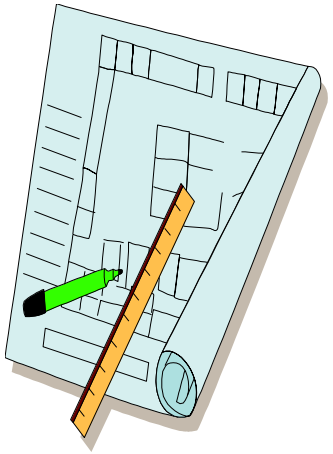


1.0 JTA Overview
2.0 JTA Core
- 2.1 Introduction
- 2.2 Information Processing Standards
- 2.3 Information Transfer Standards
- 2.4 Information Modeling, Metadata, and Information Exchange Standards
- 2.5 Human Computer Interface Standards
- 2.6 Information Security Standards

JTA Domain and Subdomain Annexes
- C4ISR - C4ISR Domain Annex
  - CRY - Cryptologic Subdomain Annex
  - NCC - Nuclear Command and Control Subdomain Annex
  - SR - Space Reconnaissance Subdomain Annex
- CS - Combat Support Domain Annex
  - ATS - Automatic Test Systems Subdomain Annex
  - DTS - Defense Transportation System Subdomain Annex
  - MED - Medical Subdomain Annex

Organization of the JTA Version 3.1

- M&S - Modeling and Simulation Domain Annex
- WS - Weapon Systems Domain Annex
  - AV - Aviation Subdomain Annex
  - GV - Ground Vehicle Subdomain Annex
  - MD - Missile Defense Subdomain Annex
  - MS - Missile Subdomain Annex
  - MUS- Munition Systems Subdomain Annex
  - SS - Soldier Systems Subdomain Annex



Appendices

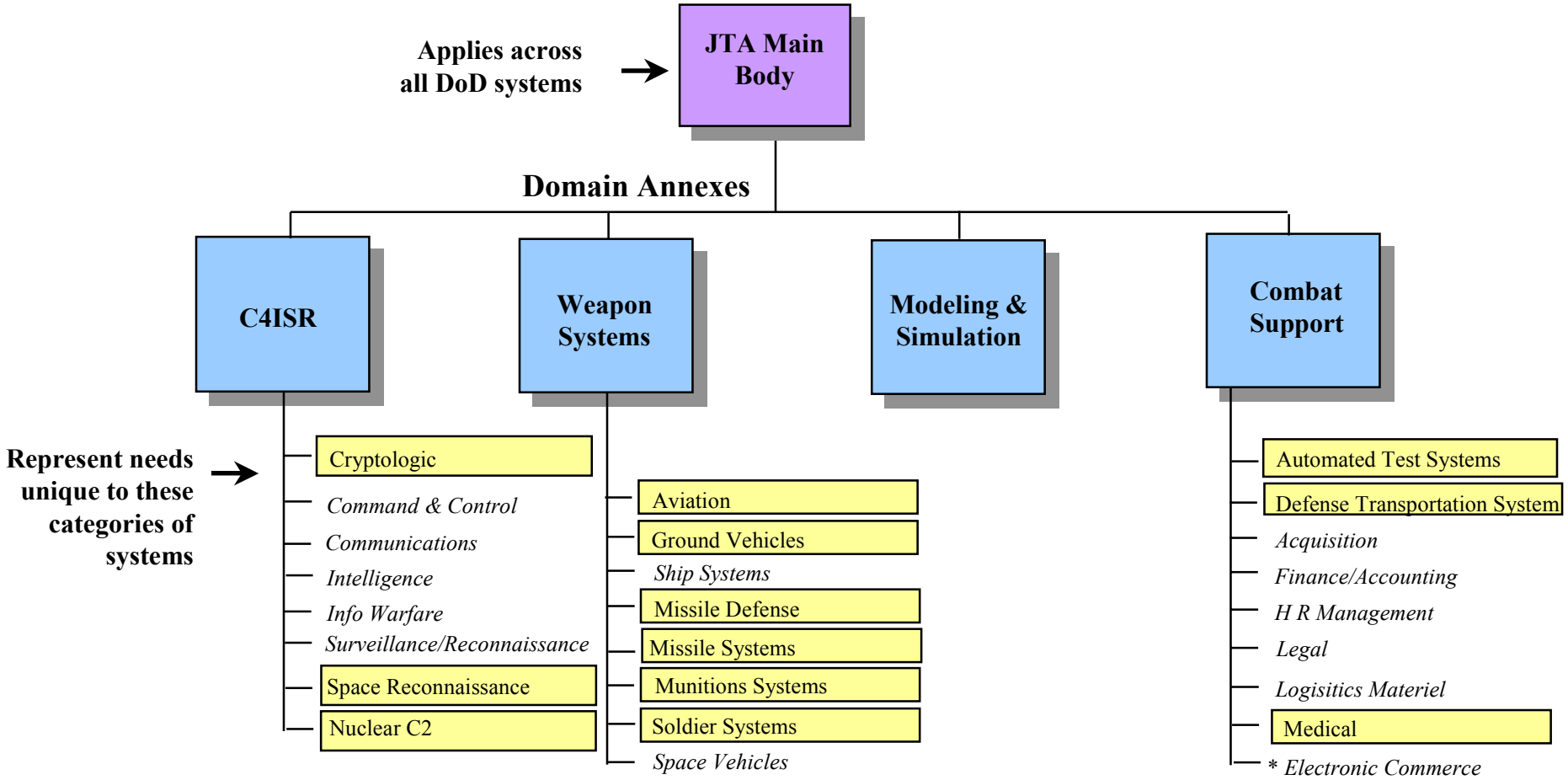
- A Abbreviations and Acronyms
- B List of Mandated Standards and Sources
- C Document Sources
- D References
- E JTA Relationship to DoD Standards Reform
- F Glossary

Standards Index

Subject Index

JTA Document Hierarchy

(Core Identified in Version 1.0 and Domain Annexes Added in Subsequent Versions)



DOD Architecture Efforts

DoD Technical Reference Model (TRM)

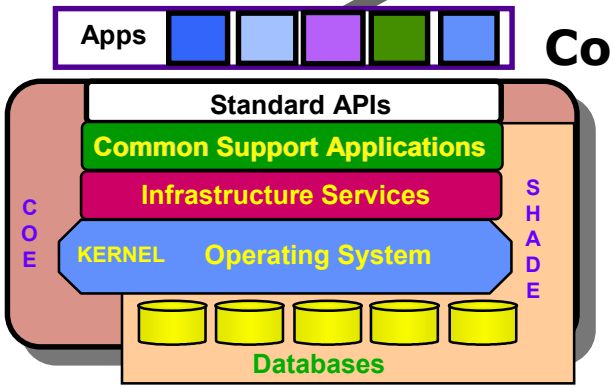
- Describes services and interfaces to be used in developing technical architectures (TAs) and TA views
- Assists in solving interoperability and portability issues

C4ISR Architecture Framework

- Ensures that architectures developed for Joint Task Forces and Combatant Commands are capable of being:
  - Interrelated
  - Uniformly compared
  - Integrated. . . across Joint and multi-national boundaries

JTA

Establishes a technical architecture for C4I interoperability

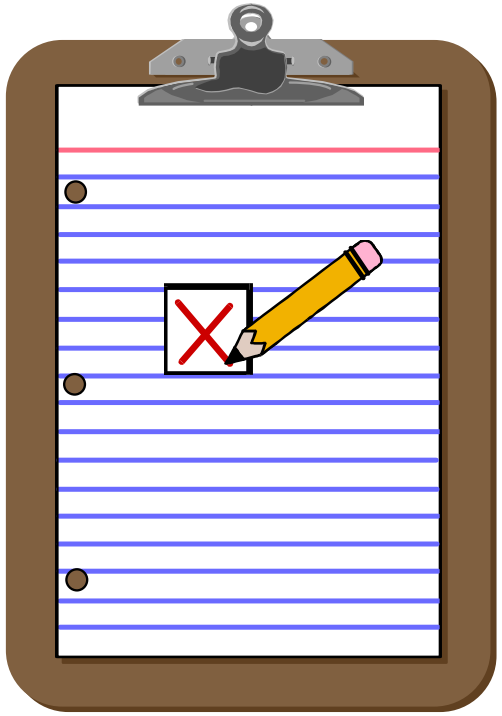


Common Operating Environment(s)

- Instantiation of C4I Technical Architecture focused on (but not limited to) Information Processing
- The JTA mandates the use of the COE

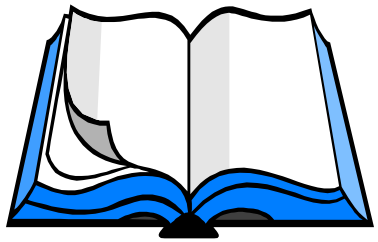
Standards Selection Criteria

- **Criteria**
  - Critical to interoperability or business case
  - Mature service, interface, or standard
  - Technically implementable
  - Publicly available
  - Consistent with authoritative sources
  - Prudent balance of multiple criteria
- **Order of Precedence**
  - International industry
  - National industry
  - Government
  - Military



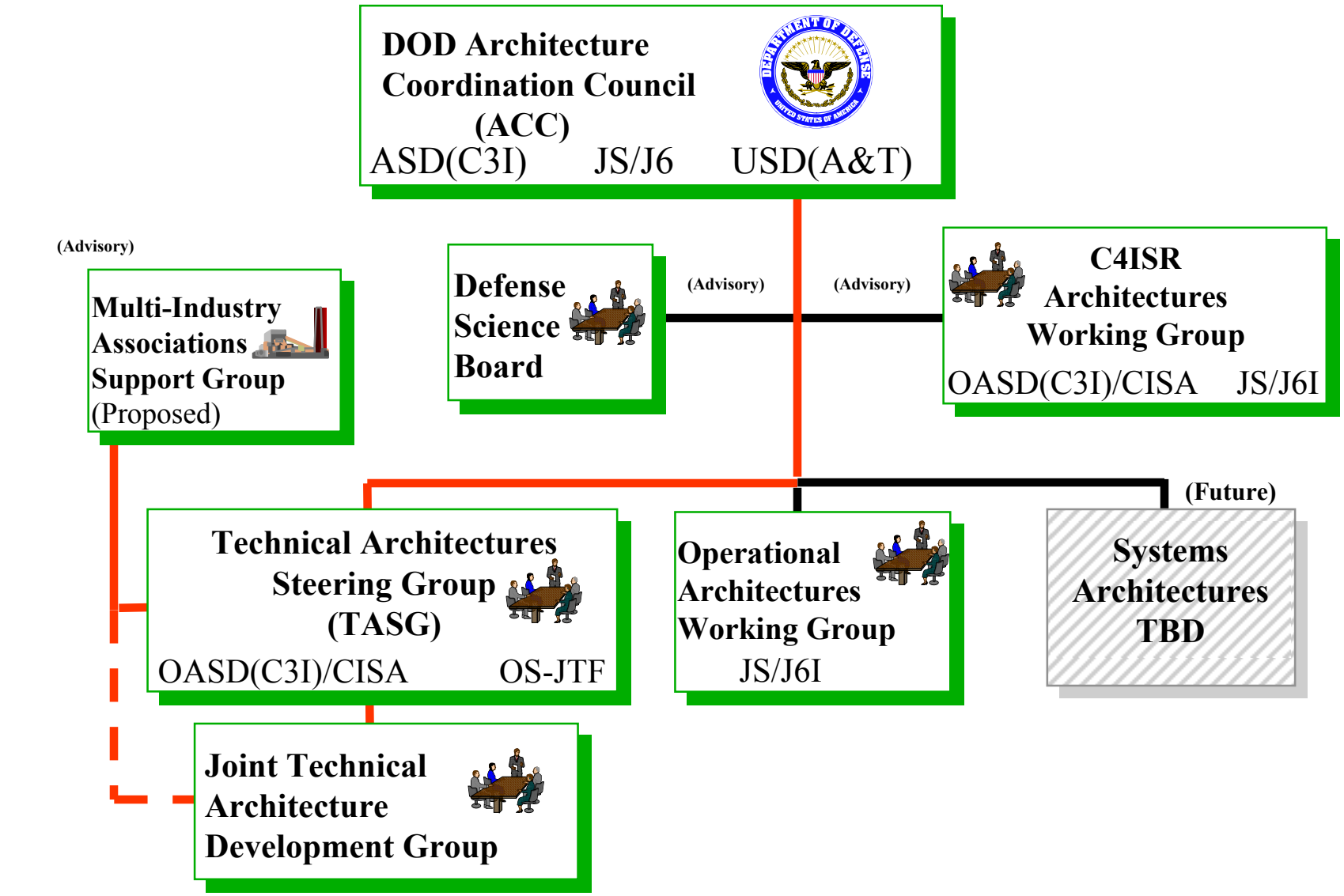
How Will the JTA Evolve?

- **JTA will evolve to keep pace with standards and technology, and to include other domains**
  - **Major release cycle currently every 5 quarters**
  - **Interim releases between major releases as Substantive Changes (indicated by dot-x, e.g. 3.1 means Version 3, Substantive Change 1)**
- **JTA Configuration Management involves full DoD and Industry participation**
  - **Implementors**
  - **Domain Experts**
  - **Technology Developers**



- **Current development and usage tools will be augmented with a Virtual JTA Tool Set**

ACC Organization Structure



JTA Review Cycle

- DOD/Industry Review Period & Comments
- JTA Representative Coordination of Comments & Sponsorship
- JTADG Subgroup Comment Review and Update Recommendations
- JTADG Review and Approval
- TASG Approval
- ACC Approval

JTA Mapping / Harmonization Activities

- **Defense Information Infrastructure, Common Operating Environment (DII COE)**
- **The Open Group Architecture Framework (TOGAF)**
- **Command and Control, Communications, and Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) Architecture Framework**
- **International Coordination, e.g.:**
  - **NATO C3 Technical Architecture**
  - **Allied Communications Protocol 140, "Common Information Technical Architecture" (ACP 140)**
- **Defense Standardization Program (DSP)**